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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
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NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing
(day/month/year)

21 APR 2010

Applicant's or agent's file reference

414/04391

IMPORTANT NOTIFICATION

International application No.

PCT/IL05/00138

International filing date (day/month/year)

04 February 2005 (04.02.2005)

Priority date (day/month/year)

05 February 2004 (05.02.2004)

Applicant

REABILITY, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 414/04391	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/IL05/00138	International filing date (<i>day/month/year</i>) 04 February 2005 (04.02.2005)	Priority date (<i>day/month/year</i>) 05 February 2004 (05.02.2004)	
International Patent Classification (IPC) or national classification and IPC IPC: A61H 1/00(2006.01) USPC: 601/5			
Applicant REABILITY, INC.			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>6</u> sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).			
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application			
Date of submission of the demand 17 January 2006 (17.01.2006)		Date of completion of this report 31 March 2010 (31.03.2010)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No.		Authorized officer MICHAEL BROWN Telephone No. 571-272-4972	

Box No. 1 Basis of the report1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
 pages 1-25 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____
- ☒ the claims:
 pages NONE as originally filed/furnished
 pages* NONE as amended (together with any statement) under Article 19
 pages* 26-31 received by this Authority on 17 January 2006 (17.01.2006)
 pages* NONE received by this Authority on _____
- ☒ the drawings:
 pages 1-9 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

5. ☐ This report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 70.2(e)).

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IL05/00138**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>1-55</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-55</u>	NO
Industrial Applicability (IA)	Claims <u>1-55</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)

Claims 1-17 and 40-55 lack novelty under PCT Article 33(2) as being anticipated by Rogozinski.

Claims 18-39 lack novelty under PCT Article 33(2) as being anticipated by Martin et al.

Claims 1-55 meet the criteria set out in PCT Article 33(4), and thus meet industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

CLAIMS

1. A method for gait rehabilitation, comprising:
identifying at least one deficient gait element;
exercising said deficient gait element individually using a rehabilitation apparatus;
and
exercising said deficient gait element in concert with at least one other gait element in more than one plane on the same side of the body, using said rehabilitation apparatus.
2. A method of claim 1, wherein gait elements are chosen from a group consisting of feet, legs, hips, torso, shoulders, head, hands and arms.
3. A method of claim 1, further comprising exercising a complex gait.
4. A method of claim 3, wherein a complex gait is chosen from the group consisting of balance, overcoming obstacles, moving backwards, movement on steps, turning, movement on slopes and varying speed.
5. A method of claim 1, wherein said gait rehabilitation is performed sitting down.
6. A method of claim 5, wherein said gait rehabilitation is performed in a wheelchair.
7. A method of claim 1, wherein said gait rehabilitation is performed utilizing an object designed to assist with movement.
8. A method of claim 7, wherein said object is selected from a group consisting of a walker, crutches, ski poles, a walking stick or a cane.
9. A method for gait rehabilitation, comprising:
detecting the positions of at least one gait element during movement;
recording the detected positions of the at least one gait element, wherein position recordings are made;
displaying said position recordings of the at least one gait element; and
exercising at least one gait element based on said display of said recording.

10. A method of claim 9, wherein a gait element is chosen from a group consisting of feet, legs, hips, torso, shoulders, head, hands and arms.
11. A method of claim 9, wherein at least one position sensor is used for said detecting.
12. A method of claim 9, wherein at least one optical sensing device is used for said detecting.
13. A method of claim 9, wherein at least one position sensor and at least one optical sensing device is used for said detecting.
14. A method of claim 9, wherein said position recordings are of movements performed by a person undergoing rehabilitation.
15. A method of claim 9, wherein said position recordings are of movements performed by a person not undergoing rehabilitation.
16. A method according to any of claims 9-15, wherein said exercising is analyzed in comparison to said position recordings.
17. A method of claim 16, wherein additional exercise is performed based on said analysis.
18. Apparatus for rehabilitation comprising:
 - a motorized pedal adapted to be moved in a plane perpendicular to a surface; and
 - a track adapted to support said pedal and a weight of a patient of at least 40 Kg when said pedal moves at a line near and parallel to said surface.
19. Apparatus for rehabilitation, comprising:
 - a first motor, wherein said first motor provides movement to components of the apparatus on an x-axis generally parallel to a surface;

a second motor, wherein said second motor provides movements to components of the apparatus on a z-axis generally perpendicular to a surface; and

at least one foot pedal component, wherein said foot pedal is operationally connected to said first and second motors and wherein said foot pedal rotates in a plurality of axes.

20. Apparatus according to claim 19, comprising a track for supporting a weight of a patient when said pedal travels along said x-axis with said z-axis being at a minimum value.

21. Apparatus according to claim 19, comprising a foot rest;
wherein when a weight of a patient is placed on said foot rest, said first and second motors vary the amount of movement force provided to said foot pedal component.

22. An apparatus of claim 21, wherein said apparatus is adapted to be used in water.

23. An apparatus of claim 21, wherein said apparatus is portable.

24. An apparatus of claim 21, wherein said foot pedal is equipped with pressure sensors in order to gauge and analyze the patient's force applied on at least one location by a foot of the patient.

25. An apparatus of claim 21, wherein said foot pedal has the capability to extend and retract along a y-axis perpendicular to said axes.

26. An apparatus of claim 25, wherein turning is exercised by utilizing at least the rotational and extension capabilities of said foot pedal while the patient follows a hypothetical curved path.

27. An apparatus of claim 21, wherein said foot rest is a treadmill.

28. An apparatus of claim 21, wherein said foot rest is a second motorized foot pedal.

29. An apparatus of claim 28, wherein said apparatus varies the power to each of said pedals according to a placement of weight of said patient.

30. An apparatus of claim 21, wherein said apparatus further comprises extending support legs for apparatus stability enhancement.
31. An apparatus of claim 21, wherein said foot pedal can be attached to the apparatus at either side.
32. An apparatus of claim 21, wherein the travel of said foot pedal in the z axis is 20-50 centimeters.
33. An apparatus of claim 21, wherein said foot pedal is connected to the apparatus at the bottom of said foot pedal.
34. An apparatus of claim 21, wherein said foot pedal is adapted to receive a prosthetic foot.
35. An apparatus of claim 28, where said second foot pedal is adapted to receive a prosthetic foot.
36. An apparatus of claim 21, wherein said motors vary movement to at least some components of said apparatus based on patient use of a walking aid.
37. An apparatus of claim 36, wherein said walking aid is selected from a group consisting of a cane, crutches, ski poles, a walking stick or a walker.
38. An apparatus of claim 21, wherein said patient exercises with said apparatus while in a seated position.
39. Apparatus for gait training, comprising:
at least one element adapted to move a foot of a patient;
at least one armpit support; and
at least one motor adapted to move said armpit support such that a patient supported by said support is moved from a sitting posture to a standing posture.

40. Apparatus for gait training, comprising:
at least one element adapted to move a foot of a patient;
at least one chair having a seating surface; and
at least one motor adapted to tilt said seating surface.
41. Apparatus according to claim 40, wherein said seat lifts while tilting.
42. An apparatus of claim 40, wherein said chair rotates around a vertical axis.
43. An apparatus of claim 41, comprising a backrest and wherein when said chair is moved by said motor, the relationship between said seat and said backrest varies.
44. An apparatus of claim 43, wherein said chair is provided with at least one torso support.
45. An apparatus of claim 43, wherein said backrest is articulated.
46. A method of gait rehabilitation, comprising:
attaching a pedal rotatable in a plurality of axes to a foot of a patient; and
automatically controlling the rotating said pedal to rehabilitate said patient.
47. A method according to claim 46, wherein said rotating is in at least two axes.
48. A method according to claim 46, comprising automatically controlling the translation said foot during said rotating.
49. A method according to claim 46, wherein controlling the rotating comprises restricting the rotation range.
50. A method according to claim 46, wherein controlling the rotating comprises restricting the rotation angle.

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51. A method according to claim 46, wherein controlling the rotating comprises applying a resistive force to rotation.
52. A method according to claim 46, wherein controlling the rotating comprises causing said rotation.
53. A method according to claim 46, wherein controlling the rotating comprises initiating said rotation and allowing the rotation to continue to completion of a desired amount.
54. A method according to claim 46, comprising rehabilitating two feet concurrently.
55. A method according to any of claims 46-54, wherein said pedal is movable in a plane perpendicular to a surface and wherein said automatically controlling the rotation is responsive to movement of said pedal in said plane.

SEQUENCE LISTINGS AND TABLES RELATED THERETO IN INTERNATIONAL APPLICATIONS FILED IN THE U.S. RECEIVING OFFICE

The Administrative Instructions (AIs) under the Patent Cooperation Treaty (PCT), in force as of **July 1, 2009**, contain important changes relating to the manner of filing, and applicable fees for, sequence listings and/or tables related thereto (sequence-related tables) in international applications. The complete text may be accessed at <http://www.wipo.int/pct/en/texts/index.htm>.

Effective July 1, 2009, Part 8 and Annex C-*bis* will no longer form part of the AIs. Part 8 was introduced in 2001 as a temporary solution to problems arising from the filing of very large sequence listings on paper and provided for a *sequence listing forming part of the international application* to be filed in electronic form on physical medium (e.g., CD), together with the remainder of the application on paper. In 2002, Part 8 was expanded to include sequence-related tables and Annex C-*bis* was added to provide technical requirements. All applicants may now file complete international applications in electronic form, eliminating the need for these temporary provisions.

I. AIS PART 8 AND ANNEX C-BIS DELETED AS OF JULY 1, 2009

- A) **Sequence-related tables cannot be filed as a separate part of the description or in text format.** They must be provided as an integral part of the international application either:
- in PDF format as part of an international application filed in electronic form via EFS-Web; or
 - on paper as part of an international application filed on paper.
- B) **A *sequence listing forming part of an international application* may be provided either:**
- in electronic form, as part of an international application filed in electronic form via EFS-Web, in
 - Annex C/ST.25 text format (preferred), or
 - PDF format; or
 - on paper as part of an international application filed on paper.
- C) **A *sequence listing not forming part of the international application* (for search under PCT Rule 13ter) in Annex C/ST.25 text format**
- is not required where the *sequence listing forming part of the international application* was filed in Annex C/ST.25 text format as part of an international application filed in electronic form via EFS-Web
 - is required for search where the *sequence listing forming part of the international application* was filed in PDF
 - is required for search on physical medium (e.g., CD) where the *sequence listing forming part of the international application* was filed on paper as part of an international application filed on paper.

II. CALCULATION OF THE INTERNATIONAL FILING FEE AND FEE REDUCTION UNDER AI § 707

- A) **A sequence-related table** must form an integral part of the international application and will incur FULL page fees with no upper limit.
- B) **A *sequence listing forming part of an international application* filed:**
- via EFS-Web in Annex C/ST.25 text format will incur NO page fees;
 - on paper or in PDF format will incur FULL page fees with no upper limit.

III. AVAILABILITY OF SEQUENCE LISTINGS SUBMITTED FOR SEARCH UNDER PCT RULE 13TER

International Searching Authorities will be required to transmit to the International Bureau a copy of an Annex C/ST.25 text format sequence listing provided for search under PCT Rule 13ter. Any such sequence listing will be made available on PATENTSCOPE® (*sequence listings forming part of the international application* are already available).

IV. JULY 2009 REQUEST (PCT/RO/101)

The Request now has two options for the last sheet: one for paper filings; and one for EFS-Web filings. The July 2009 Request may be accessed at <http://www.wipo.int/pct/en/forms/index.htm>.